

UnumProvident Corporation)	Departmental
Cumberland County)	Findings of Fact and Order
Portland, Maine)	Air Emission License
A-657-71-D-R)	

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

UnumProvident Corporation (Unum) of Portland, Maine has applied to renew their Air Emission License, permitting the operation of emission sources associated with their insurance office building.

B. Emission Equipment

Unum is authorized to operate the following air emission units:

Fuel Burning Equipment

Equipment	Date of Construction	Maximum Capacity (MMBtu/hr)	Fuel Type, %Sulfur	Maximum Firing Rate (scf/hr)	Stack #
HO1-Boiler #1	1994	2.4	Natural Gas	2330	4
HO1-Boiler #2	1994	1.0	Natural Gas	970.9	5
HO2-Boiler #1	1995	10	Natural Gas	9709	1
HO2-Boiler #2	1995	10	Natural Gas	9709	1
HO2-Boiler #3	1996	1.0	Natural Gas	970.9	1
HO3-Boiler #1	1998	4.5	Natural Gas	4369	6
HO3-Boiler #2	1998	4.47	Natural Gas	4344	7
HO3-Boiler #3	1998	4.47	Natural Gas	4344	7
HO3-Boiler #4	1998	4.47	Natural Gas	4344	7

Electrical Generation Equipment

Equipment	Power Output (kW)	Engine Firing Rate (gal/hr)	Maximum Capacity (MMBtu/hr)	Stack #
HO1-Gen #1	365	11.6	1.51	3
HO2-Gen #2	365	19.4	2.52	2
HO3-Gen #3	725	10.1	1.38	8

C. Application Classification

The application for Unum does not include the licensing of increased emissions or the installation of new or modified equipment, therefore the license is considered to be a renewal of current licensed emission units only.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers

All licensed boilers at Unum, except HO2-Boiler #1 and HO2-Boiler #2, have a heat input less than 10.0 MMBtu/hr and are therefore not subject to New Source Performance Standards (NSPS) Subpart Dc.

HO2-Boiler #1 and HO2-Boiler #2 each have a heat input capacity of 10.0 MMBtu/hr and are therefore subject to NSPS Subpart Dc. As such, Unum shall comply with all applicable reporting and record keeping requirements established in 40 CFR Part 60, Subpart Dc. Unum petitioned the U.S. Environmental Protection Agency (EPA) to extend the daily fuel use record keeping to monthly. Pursuant to 40 CFR Part 60 Subpart 13(i), the U.S. EPA approved the request to

record and maintain the fuel usage on a monthly basis. However, the fuel usage must be monitored separately for each boiler.

BPT for the licensed boilers at Unum is the following:

- Use of natural gas.
- SO₂, NO_x, CO and VOC emission data was taken from AP-42 dated 10/96 for boilers having a heat input of 0.5 to 10 MMBtu/hr firing natural gas.
- Emission limits for PM and PM₁₀ were taken from MEDEP Regulations, Chapter 103.
- Visible emissions from the stacks serving the licensed boilers at Unum (Stack 1, 4, 5, 6 and 7) shall not exceed an opacity of 10 percent on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

C. Emergency Generators

Diesel fuel having a maximum sulfur content of 0.05% will be fired in each of the three emergency generators. The annual hours of operation for each generator shall be less than 500 hours per year. Emission limits from the generator were calculated using EPA AP-42 emission factors.

Visible emissions from each emergency generator shall not exceed 30% on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

D. Annual Emission Restrictions

Unum is limited to the following fuel usage and has the following annual emissions, based on a 12 month rolling total:

- 100,000,000 cubic feet of natural gas facility wide
- 500 hours of operation per year per emergency generator

Total Annual Emissions for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/yr</u>
PM	6.6
PM ₁₀	6.6
SO ₂	0.1
NO _x	11.0
CO	5.5
VOC	0.8

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a minor new source shall be determined on a case-by-case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-657-71-D-R subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.

- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 MRSA §353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records, to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for the renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
 - (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department

- that equipment may be operating out of compliance with emission standards or license conditions; or
- b. pursuant to any other requirement of this license to perform stack testing.
- (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
- (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
- (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
- (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.

(15) Upon written request of the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

(16) Boilers

A. Emissions from HO1-Boiler #1 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.29
PM ₁₀	0.29
SO ₂	0.01
NO _x	0.23
CO	0.20
VOC	0.01

B. Emissions from HO1-Boiler #2 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.12
PM ₁₀	0.12
SO ₂	0.01
NO _x	0.10
CO	0.08
VOC	0.01

C. Emissions from HO2-Boiler #1 and #2 unit shall not exceed the following (each):

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.12	1.20
PM ₁₀	n/a	1.20
SO ₂	n/a	0.01
NO _x	n/a	0.97
CO	n/a	0.82
VOC	n/a	0.05

D. New Source Performance Standards for HO2-Boiler #1 and HO2-Boiler #2

1. Unum shall comply with the requirements of Federal New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc for HO2-Boiler #1 and HO2-Boiler #2 with the exception that fuel usage shall be maintained on a monthly basis and fuel usage must be monitored separately for each boiler.
2. Unum shall submit to EPA and the Department semi-annual reports. These reports shall include the calendar dates covered in the reporting period and records of monthly fuel use for each boiler. The semi-annual reports are due within 30 days of the end of each 6-month period.
3. The following address for EPA shall be used for any reports or notifications required to be copied to them:

Compliance Clerk
USEPA Region 1
1 Congress Street
Suite 1100
Boston, MA 02114-2023

E. Emissions from HO2-Boiler #3 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.12
PM ₁₀	0.12
SO ₂	0.01
NO _x	0.10
CO	0.08
VOC	0.01

F. Emissions from HO3-Boiler #1 shall not exceed the following:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.12	0.54
PM ₁₀	n/a	0.54
SO ₂	n/a	0.01
NO _x	n/a	0.44
CO	n/a	0.37
VOC	n/a	0.02

- G. Emissions from HO3-Boiler #2, #3 and #4 shall not exceed the following (each):

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.10	0.54
PM ₁₀	n/a	0.54
SO ₂	n/a	0.01
NO _x	n/a	0.43
CO	n/a	0.36
VOC	n/a	0.02

- H. All licensed boilers at Unum shall fire only natural gas.
- I. Unum shall fire no more than 100,000,000 cubic feet of natural gas facility wide, based on a 12-month rolling total. Compliance shall be based on natural gas receipts from the supplier showing the quantity of fuel burned.
- J. Visible emissions from the stacks serving the licensed boilers at Unum (Stack 1, 4, 5, 6 and 7) shall not exceed an opacity of 10 percent on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

(17) **Emergency Generators**

- A. Emissions from Emergency Generator HO1-Gen#1 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.43
PM ₁₀	0.43
SO ₂	0.18
NO _x	8.79
CO	3.38
VOC	1.25

- B. Emissions from Emergency Generator HO2-Gen#2 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.43
PM ₁₀	0.43
SO ₂	0.18
NO _x	8.79
CO	3.38
VOC	1.25

- C. Emissions from Emergency Generator HO3-Gen#3 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.43
PM ₁₀	0.43
SO ₂	0.18
NO _x	8.79
CO	3.38
VOC	1.25

- D. Emergency generators HO1-Gen#1, HO2-Gen#2, and HO3-Gen#3 each shall be limited to 500 hours per year of operation, based on a 12 month rolling total. An hour meter shall be maintained and operated on each emergency diesel generator.
- E. The sulfur content of the fuel shall be less than or equal to 0.05% by weight, demonstrated by fuel receipts from the supplier.
- F. A log documenting the dates, times and reasons for operation for each generator shall be kept.
- G. Visible emissions from each emergency generator shall not exceed 30% opacity on a six (6) minute block average basis, except for two (2) six (6) minute block averages in a 3-hour period.
- (18) Unum shall pay the annual air emission license fee within 30 days of **December 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

UnumProvident Corporation.
Cumberland County
Portland, Maine
A-657-71-D-R

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Departmental
Findings of Fact and Order
Air Emission License

(19) The term of this order shall be for five (5) years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2002.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: August 30, 2002

Date of application acceptance: September 6, 2002

Date filed with Board of Environmental Protection: _____

This order prepared by Mark. E. Roberts, Bureau of Air Quality